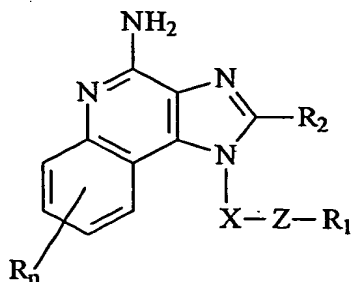


WHAT IS CLAIMED IS:

1. A compound of the formula (I):



(I)

wherein:  $X$  is  $-CHR_3-$ ,  $-CHR_3$ -alkyl-, or  $-CHR_3$ -alkenyl-;

$Z$  is  $-S-$ ,  $-SO-$ , or  $-SO_2-$ ;

$R_1$  is selected from the group consisting of:

-alkyl;

-aryl;

-heteroaryl;

-heterocyclyl;

-alkenyl;

$-R_4$ -aryl;

$-R_4$ -heteroaryl;

$-R_4$ -heterocyclyl;

$R_2$  is selected from the group consisting of:

-hydrogen;

-alkyl;

-alkenyl;

-aryl;

-heteroaryl;

-heterocyclyl;

-alkyl-Y-alkyl;

- alkyl-Y-alkenyl;  
-alkyl-Y-aryl; and  
- alkyl or alkenyl substituted by one or more substituents selected  
from the group consisting of:

- 5                    -OH;  
                     -halogen;  
                     -N(R<sub>3</sub>)<sub>2</sub>;  
                     -CO-N(R<sub>3</sub>)<sub>2</sub>;  
                     -CO-C<sub>1-10</sub> alkyl;  
10                   -CO-O-C<sub>1-10</sub> alkyl;  
                     -N<sub>3</sub>;  
                     -aryl;  
                     -heteroaryl;  
                     -heterocyclyl;  
15                   -CO-aryl; and  
                     -CO-heteroaryl;

each R<sub>3</sub> is independently H or C<sub>1-10</sub> alkyl;

each R<sub>4</sub> is independently alkyl or alkenyl;

each Y is independently -O- or -S(O)<sub>0-2</sub>;

20                   n is 0 to 4; and

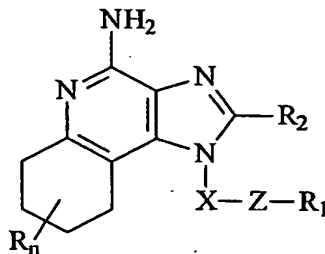
each R present is independently selected from the group consisting of C<sub>1-10</sub>  
alkyl, C<sub>1-10</sub> alkoxy, hydroxy, halogen and trifluoromethyl;  
or a pharmaceutically acceptable salt thereof.

- 25           2.        A compound of claim 1 wherein Z is -S-.
3.        A compound of claim 1 wherein Z is -SO<sub>2</sub>-.
4.        A compound of claim 1 wherein R<sub>1</sub> is -alkyl.
- 30           5.        A compound of claim 1 wherein R<sub>1</sub> is -aryl.

6. A compound of claim 1 wherein R<sub>1</sub> is phenyl.
7. A compound of claim 1 wherein R<sub>1</sub> is heteroaryl.
- 5 8. A compound of claim 1 wherein X is  $-(CH_2)_{2-6}-$ .
9. A compound of claim 1 wherein R<sub>2</sub> is H.
- 10 10. A compound of claim 1 wherein R<sub>2</sub> is  $-alkyl-O-alkyl$ .
11. A compound of claim 1 wherein R<sub>2</sub> is  $-alkyl$ .
12. A compound selected from the group consisting of:
  - 2-butyl-1-[4-(phenylthio)butyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 15 2-butyl-1-[2-(phenylthio)ethyl]-6,7,8,9-tetrahydro-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 2-butyl-1-[4-(phenylsulfonyl)butyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 2-butyl-1-[4-(methylthio)butyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 2-butyl-1-[4-(methylsulfonyl)butyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 1-[2-(phenylthio)ethyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 20 1-[4-(phenylsulfonyl)butyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 1-[4-(methylsulfonyl)butyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 1-[4-(phenylthio)butyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 1-[4-(methylthio)butyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 2-butyl-1-[5-(methylsulfonyl)pentyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 25 2-methyl-1-[5-(methylsulfonyl)pentyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 2-ethyl-1-[5-(methylsulfonyl)pentyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 1-[5-(methylsulfonyl)pentyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 2-hexyl-1-[5-(methylsulfonyl)pentyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 2-(2-methoxyethyl)-1-[5-(methylsulfonyl)pentyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 30 2-butyl-1-[5-(methylthio)pentyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 2-butyl-1-[5-(methylsulfinyl)pentyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;
  - 2-butyl-1-[3-(methylsulfonyl)propyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine; and

2-butyl-1-[3-(phenylsulfonyl)propyl]-1*H*-imidazo[4,5-*c*]quinolin-4-amine;  
or a pharmaceutically acceptable salt thereof.

13. A compound of the formula (II)



(II)

wherein: X is -CHR<sub>3</sub>-, -CHR<sub>3</sub>-alkyl-, or -CHR<sub>3</sub>-alkenyl-;

Z is -S-, -SO-, or -SO<sub>2</sub>-;

R<sub>1</sub> is selected from the group consisting of:

-alkyl;

-aryl;

-heteroaryl;

-heterocyclyl;

-alkenyl;

-R<sub>4</sub>-aryl;

-R<sub>4</sub>-heteroaryl; and

-R<sub>4</sub>-heterocyclyl;

R<sub>2</sub> is selected from the group consisting of:

-hydrogen;

-alkyl;

-alkenyl;

-aryl;

-heteroaryl;

-heterocyclyl;

-alkyl-Y-alkyl;

-alkyl-Y-alkenyl;

-alkyl-Y-aryl; and

- alkyl or alkenyl substituted by one or more substituents selected from the group consisting of:

-OH;  
-halogen;  
-N(R<sub>3</sub>)<sub>2</sub>;  
-CO-N(R<sub>3</sub>)<sub>2</sub>;  
-CO-C<sub>1-10</sub> alkyl;  
-CO-O-C<sub>1-10</sub> alkyl;  
-N<sub>3</sub>;  
-aryl;  
-heteroaryl;  
-heterocyclyl;  
-CO-aryl; and  
-CO-heteroaryl;

each R<sub>3</sub> is independently H or C<sub>1-10</sub> alkyl;

each R<sub>4</sub> is independently alkyl or alkenyl;

each Y is independently -O- or -S(O)<sub>0-2</sub>-;

n is 0 to 4; and

each R present is independently selected from the group consisting of C<sub>1-10</sub> alkyl, C<sub>1-10</sub> alkoxy, hydroxy, halogen and trifluoromethyl; or a pharmaceutically acceptable salt thereof.

14. A compound of claim 13 wherein R<sub>1</sub> is phenyl.

15. A compound of claim 13 wherein R<sub>2</sub> is H or alkyl.

16. A compound of claim 13 wherein R<sub>2</sub> is -alkyl-O-alkyl.

17. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 1 and a pharmaceutically acceptable carrier.

18. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 12 and a pharmaceutically acceptable carrier.
- 5 19. A method of inducing cytokine biosynthesis in an animal comprising administering a therapeutically effective amount of a compound of claim 1 to the animal.
20. The method of claim 19 wherein the cytokine is IFN- $\alpha$ .
- 10 21. A method of treating a viral disease in an animal comprising administering a therapeutically effective amount of a compound of claim 1 to the animal.
22. A method of treating a neoplastic disease in an animal comprising administering a therapeutically effective amount of a compound of claim 1 to the animal.
- 15 23. A method of inducing cytokine biosynthesis in an animal comprising administering a therapeutically effective amount of a compound of claim 12 to the animal.
24. The method of claim 23 wherein the cytokine is IFN- $\alpha$ .
- 20 25. A method of treating a viral disease in an animal comprising administering a therapeutically effective amount of a compound of claim 12 to the animal.
26. A method of treating a neoplastic disease in an animal comprising administering a therapeutically effective amount of a compound of claim 12 to the animal.
- 25 27. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 13 and a pharmaceutically acceptable carrier.
- 30 28. A method of inducing cytokine biosynthesis in an animal comprising administering a therapeutically effective amount of a compound of claim 13 to the animal.
29. The method of claim 29 wherein the cytokine is IFN- $\alpha$ .

30. A method of treating a viral disease in an animal comprising administering a therapeutically effective amount of a compound of claim 13 to the animal.
- 5 31. A method of treating a neoplastic disease in an animal comprising administering a therapeutically effective amount of a compound of claim 13 to the animal.